

NETWORK DESIGN & MANAGEMENT SIMULATION

GROUP 2 - CCS 2B

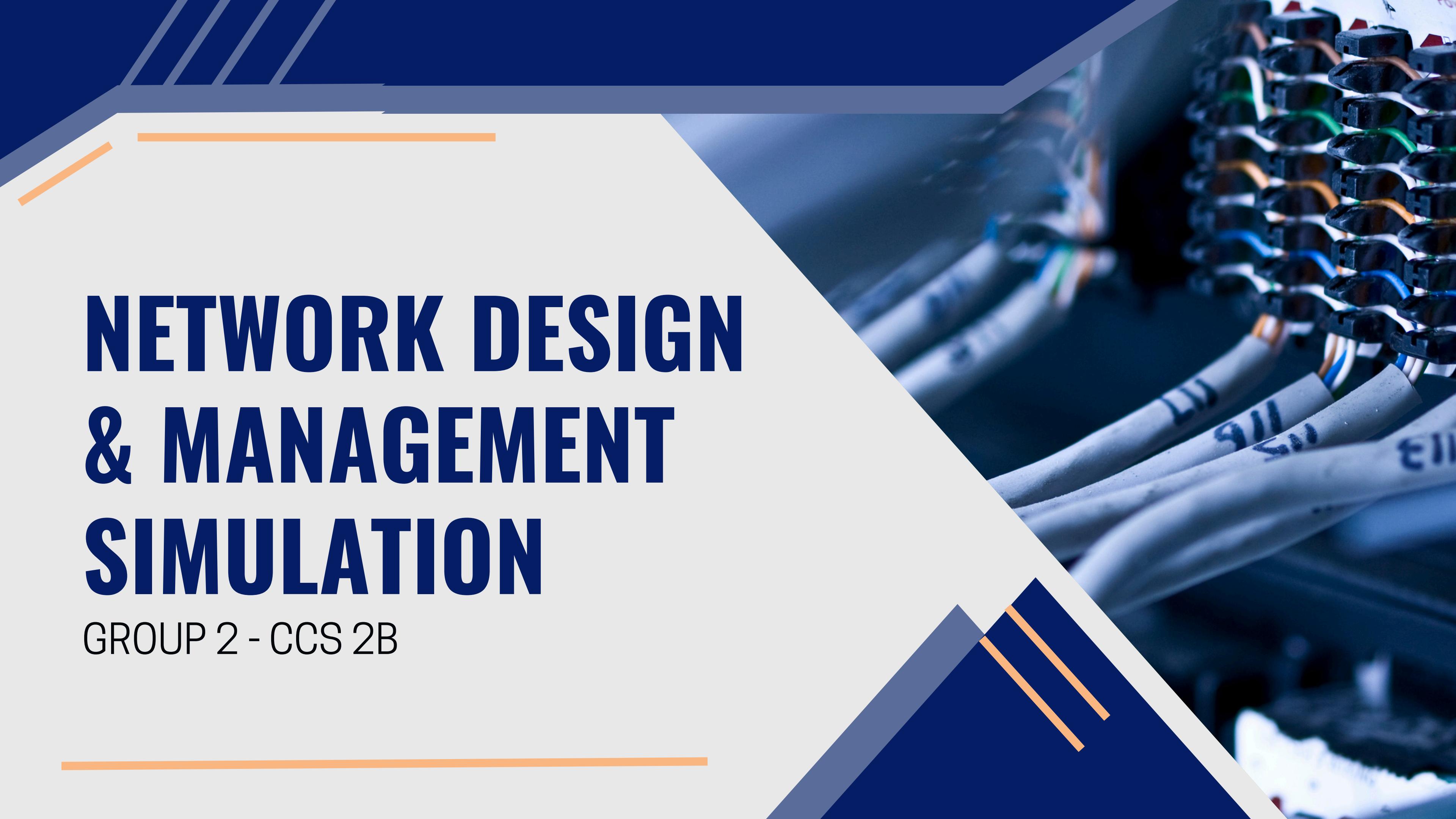


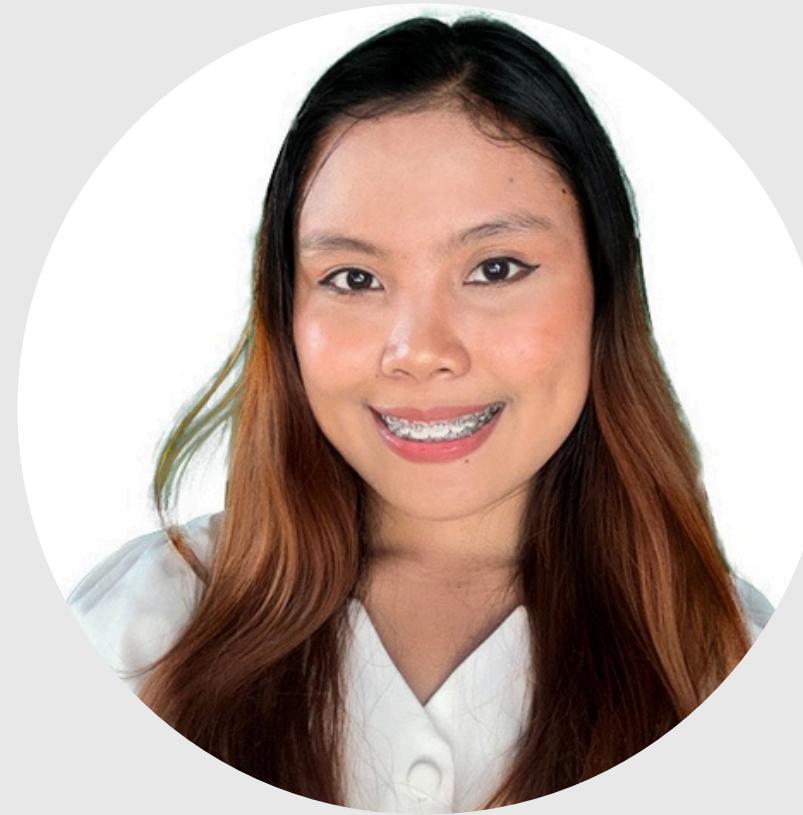
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MEMBERS



MARK JOMUEL AVENGOZA



BETHEL ALBOR



GABRIEL FRANZ A. SERVIANO

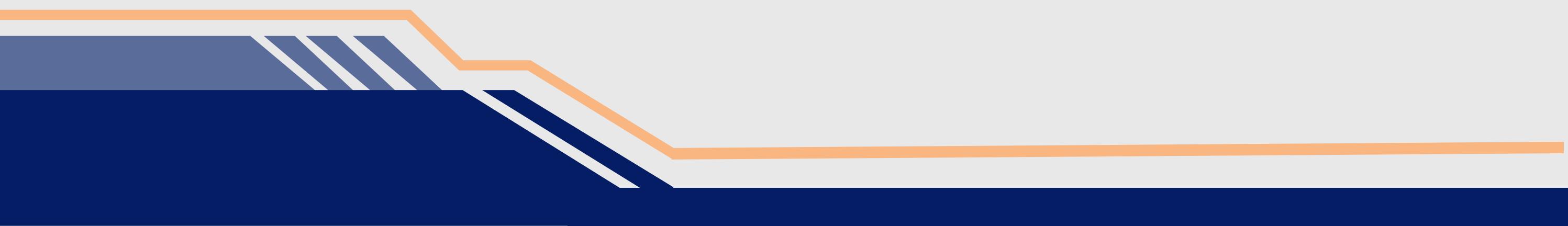




NATURE OF BUSINESS:

METAL & STEEL FABRICATION

produces high-quality metal or steel fabrication utilized for industrial purposes by using a variety of machinery, including CNC, drilling, milling, bending, drilling, and welding machines.



ABOUT OUR COMPANY

an innovative engineering company specializing in precise metal fabrication. We provide services to a wide range of customers in sectors like construction, automotive, industrial needs, and more, combining state-of-the-art technology and skilled expertise.



Since we are medium company, we have 3 storey bulding, In first floor we do have 16 employees, in 2nd floor we have 14 employees and the last floor or 3rd floor we have 24 employees and 2 guards outside of the building so we close it with the total of **56 employees**. We also have 4 departments which is cnc dep, sales dep, autocad dep, and admin dep.

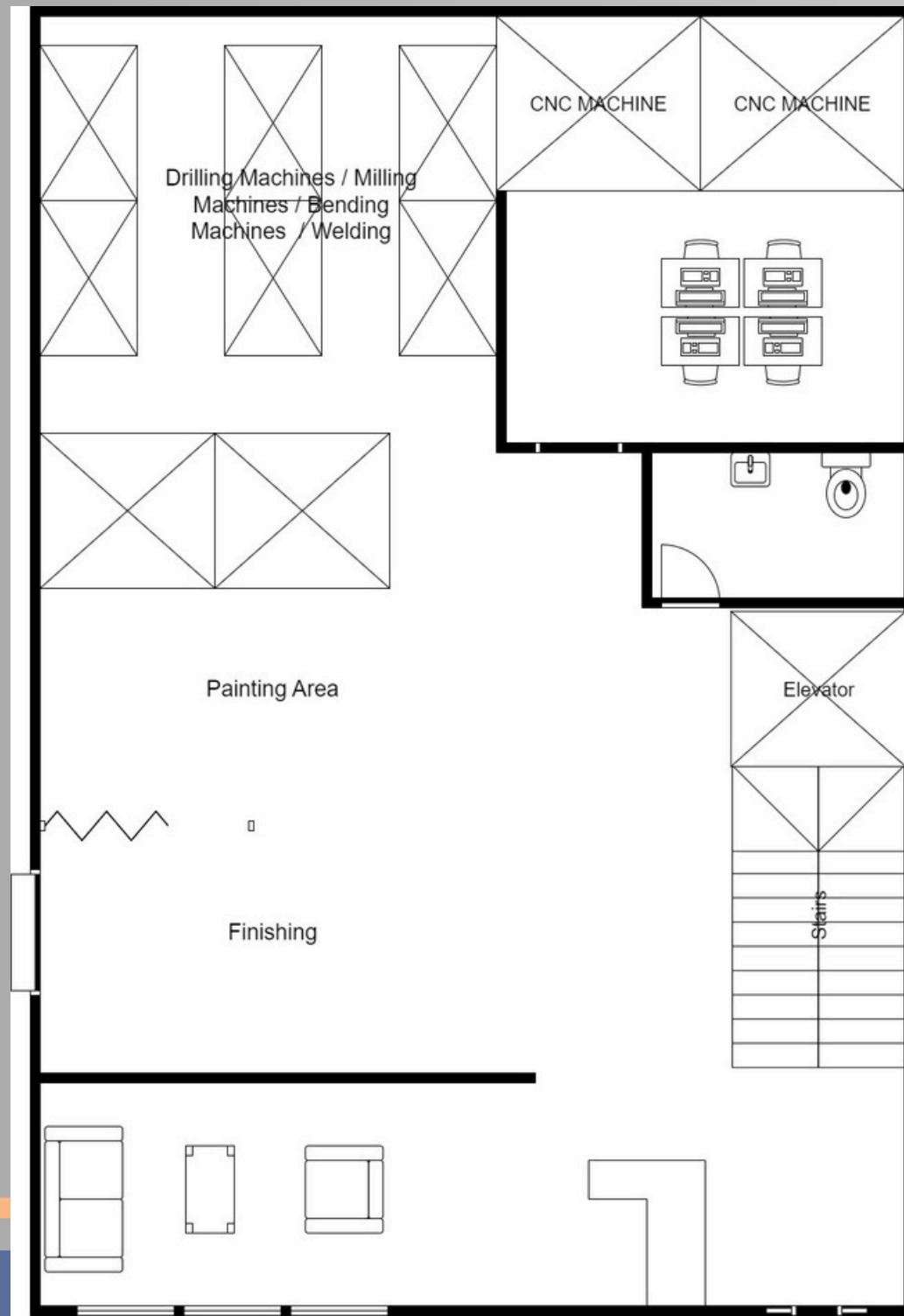
This company has no existing network yet.



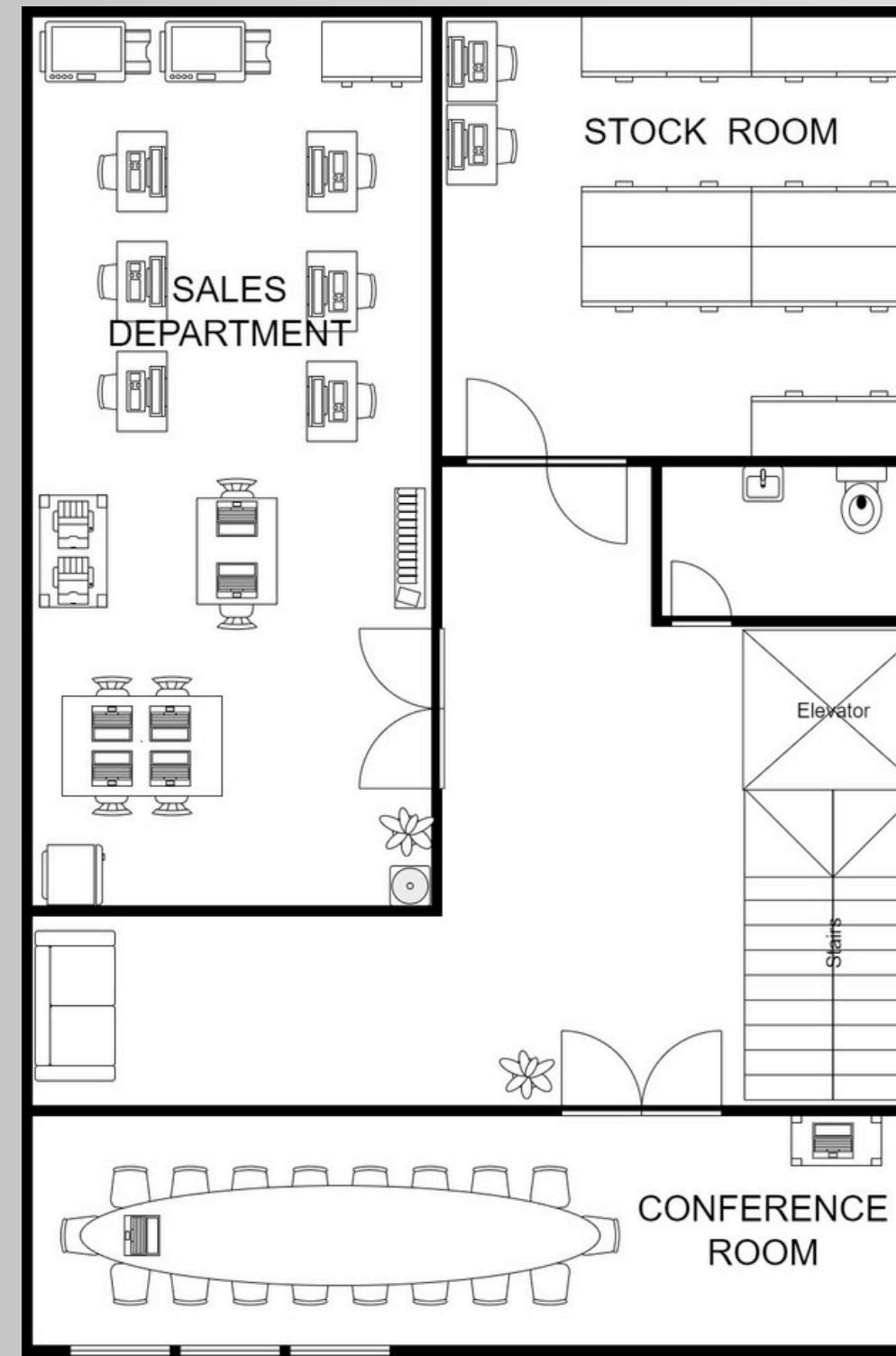


FLOOR PLAN

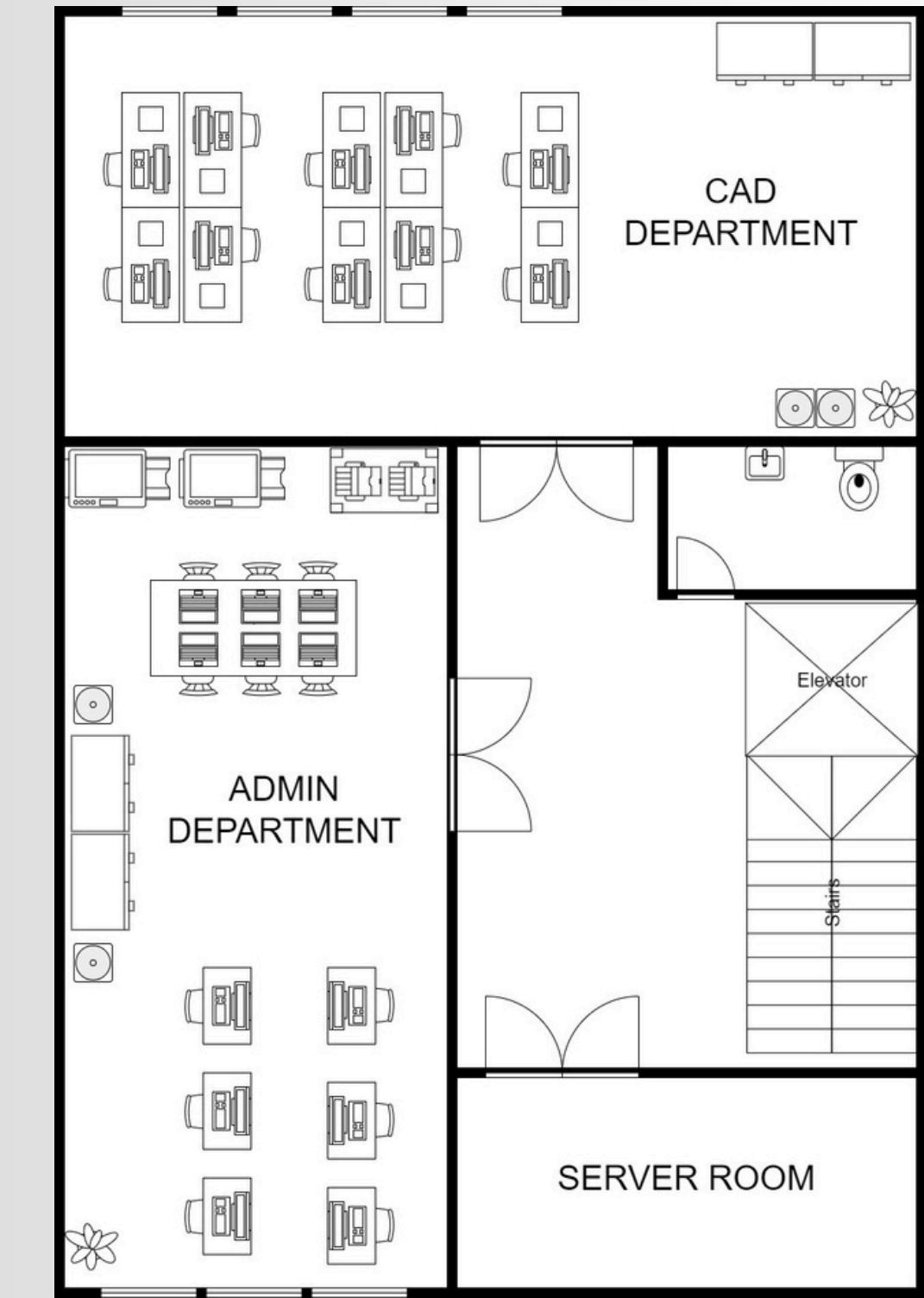
FIRST FLOOR



SECOND FLOOR



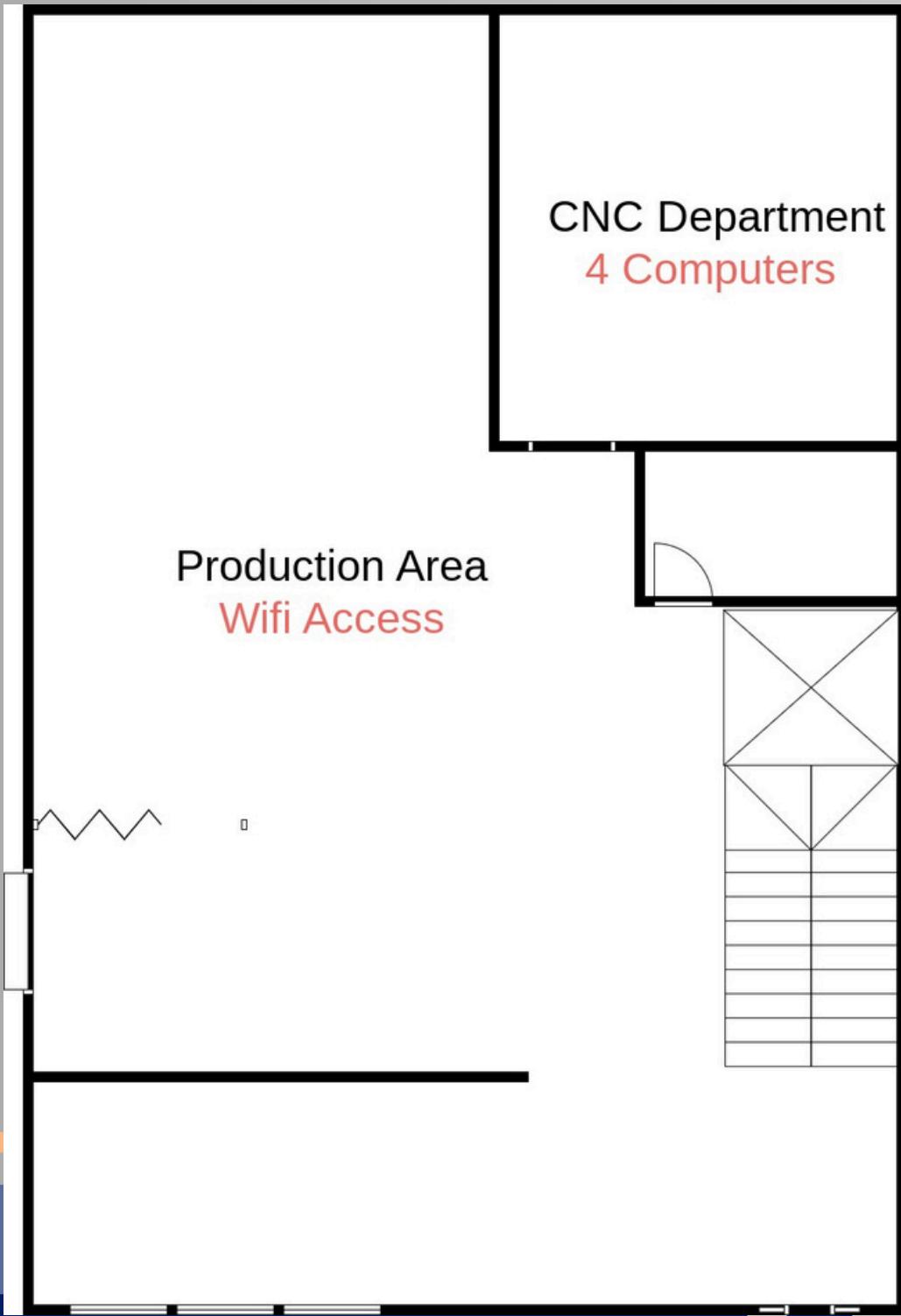
THIRD FLOOR



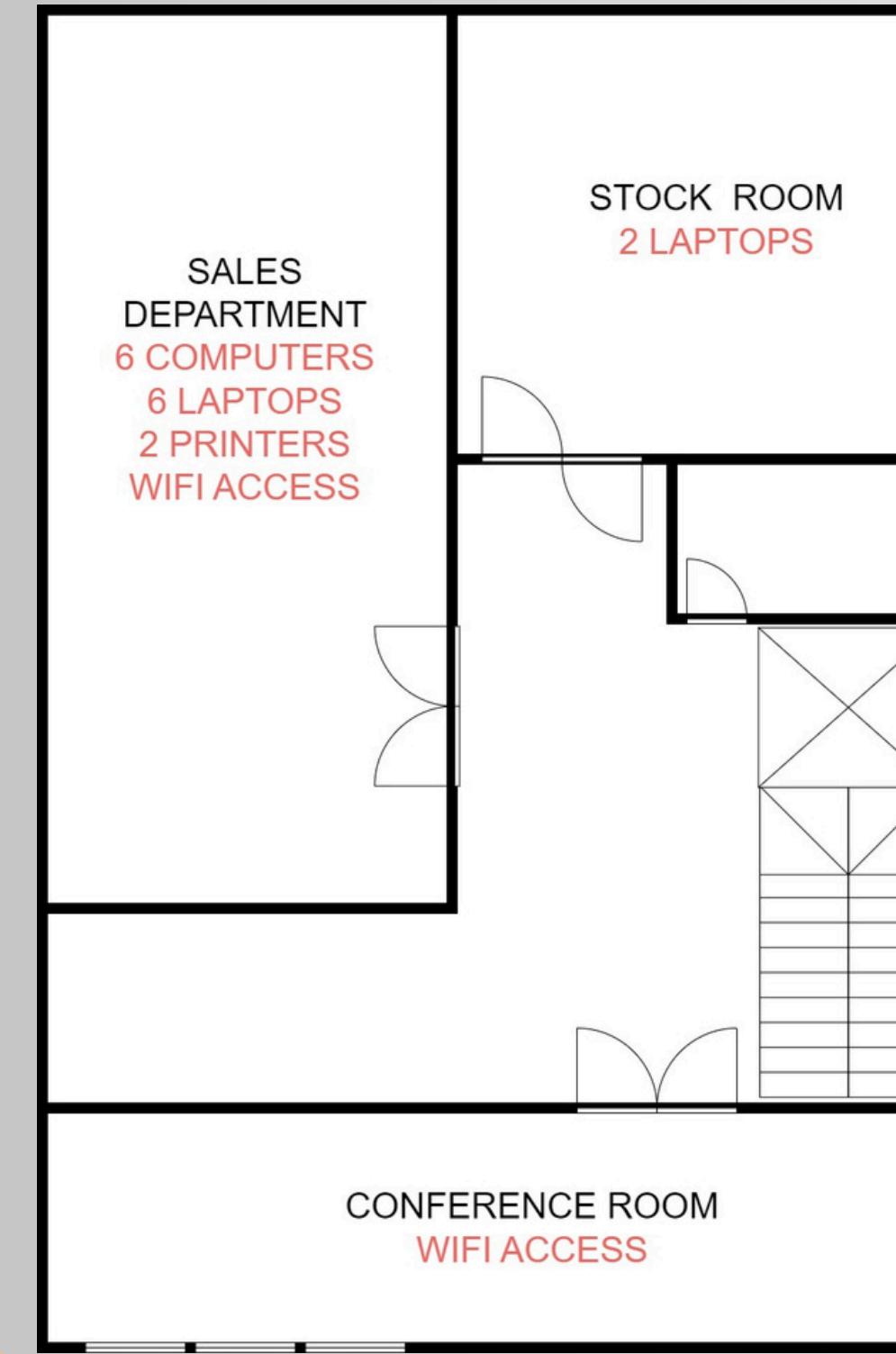
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DEVICES PER FLOOR

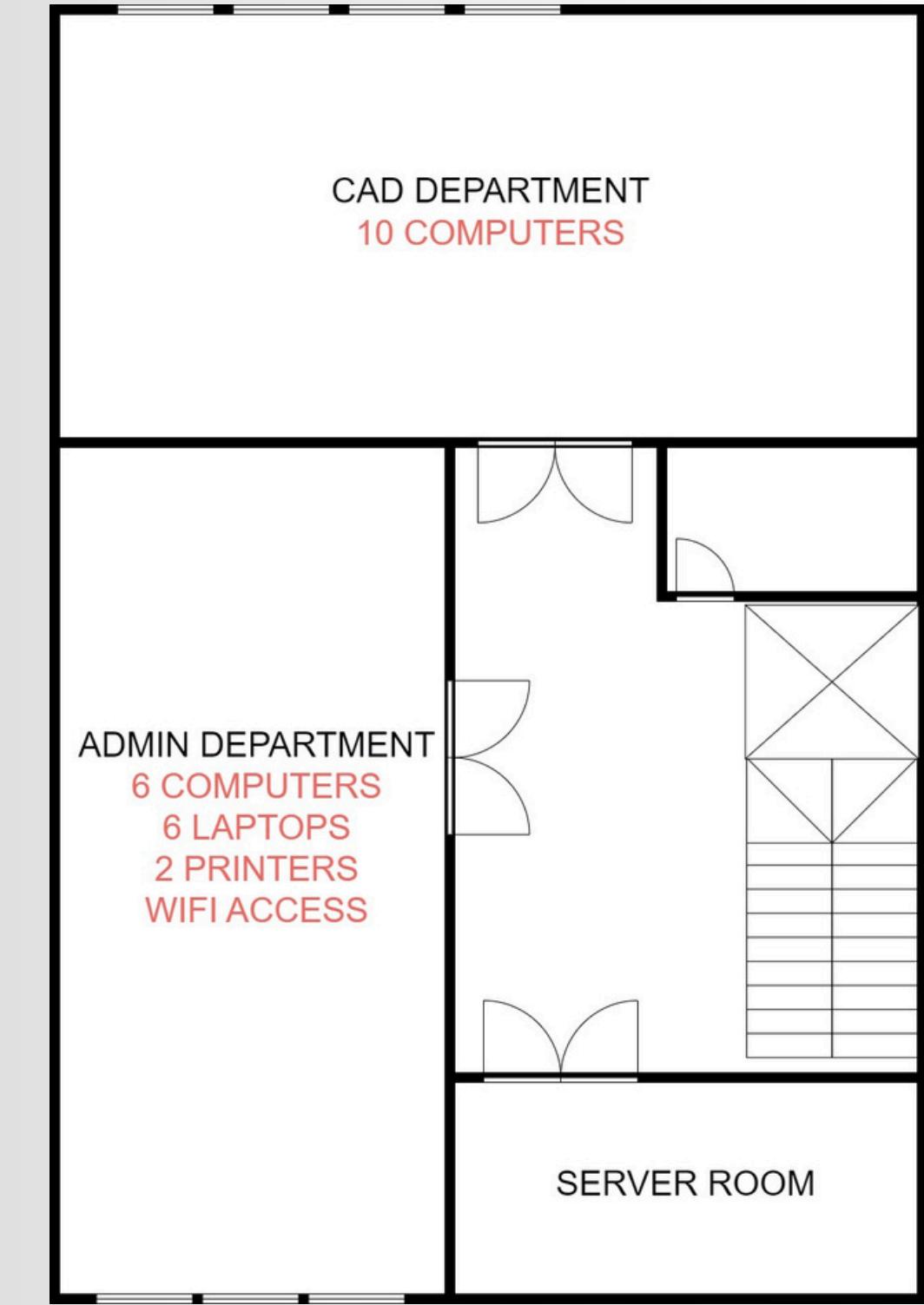
FIRST FLOOR



SECOND FLOOR



THIRD FLOOR



DESIRED BUDGET:

PHP 2.3M - 2.5M

IT CONTRACT: 500,000 ONE YEAR CONTRACT

HARDWARE/SOFTWARE/TOOLS RELATED TO NETWORK: 1,700,000

ALLOWANCE: 100,000 - 300,000

RECOMMENDED HARDWARE



SERVER

OPTION 1 : DELL POWEREDGE R740 INTEL XEON SILVER

Sale price ₱247,000.00 **4214R - GPU**

- Processor Intel Xeon Silver 4214R 2.4G, 12C/24T, 9.6GT/s, 16.5M Cache, Turbo, HT (100W) DDR4-2400
- Memory 16GB RDIMM, 3200MT/s, Dual Rank(24 DIMM slots)
- Network Controller Broadcom 5720 QP 1Gb Network Daughter Card
- Storage Controller PERC H730P RAID Controller, 2GB NV Cache, Minicard
- Hard Drive 600GB 10K RPM SAS 12Gbps 512n 2.5in Hot-plug Hard Drive (max 16 HDD)
- Optical Drive DVD+/-RW, SATA, Internal
- Power Supply Single, Hot-plug Power Supply (1+0), 750W
- Management iDRAC9,Enterprise
- Form Factor 2U Rack Server, with ReadyRails Sliding Rails With Cable Management Arm
- Warranty 3Yr ProSupport:Next Business Day Onsite Service



SERVER

Pros:

- Scalable
- Storage Flexibility for SAS, SATA, and NVMe SSDs
- Built-in security feature
- Remote management capabilities
- Energy Efficiency

Cons:

- Expensive
- Requires expertise
- Vendor Lock-in

SERVER

OPTION 2 : HPE PROLIANT DL380 GEN10

Sale price **₱293,367.83 + TAX**

12Core/24 Threads) 100W

- Memory: HPE 128GB RDIMM Dual Rank 2933MT/s. (24 DIMM Slots)
- Internal storage: 8 SFF SAS/SATA HDD Bays 4 x 3.84TB DC600M 2.5" Enterprise SSD SATA Kingston with HPE
- Caddy Storage controller: HPE Smart Array P408ia/2GB SR Controller (RAID 0/1/1+0/5/5+0 Optical)
- Drive: N/A
- Graphic card: Choice of up to 2 double wide GPGPU's, or 3 single wide GPGPU's
- Network interfaces: HPE Ethernet 1GbE Network Adapter
- Power supply: (1+0) HPE 800W Flex Slot Platinum hot plug power kit
- Form Factor: 2U Rack



OPTION 3: POWEREDGE R650XS 1U RACK SERVER

Sale price **₱198,351.34**

- 8 x 2.5" drive bays
- Intel Xeon Silver 4310T 2.3G processor
 - o 10 cores / 20 threads
 - o 105W power consumption
- 16GB RDIMM DDR4-2666 RAM
 - o Dual Rank
 - o 3200MT/s speed
- 2.4TB 10K RPM SAS ISE 12Gbps 512e 2.5in Hot-plug Hard Drive
- Dual, Hot-plug, 800W PSU (1+1) in Mixed Mode
- PERC H745 Controller
- iDRAC9, Express 15G
- Riser Config 4, 1xOCP 3.0(x16)+ 1x16LP
- Broadcom 5720 Quad Port 1GbE BASE-T Adapter
- Trusted Platform Module 2.0 V3
- Motherboard with Broadcom 5720 Dual Port 1Gb On-Board LOM



Pros:

- HPE's Silicon Root of Trust technology enhances server security
- Remote management capabilities
- Highly scalable

Cons:

- Expensive
- High power consumption
- Vendor Lock-in

SERVER

Pros:

- Support for SAS, SATA, and NVMe SSDs
- Efficient Cooling
- Energy-Efficient

Cons:

- Expensive
- Requires expertise
- Vendor Lock-in

SWITCH

OPTION 1 : CISCO SG110D-16HP-EU 16 PORT POE GIGABIT SWITCH

Price: **12,988**

▪ Interfaces/Ports:

Total Number of Network Ports 16

Number of PoE (RJ-45) Ports 8

Number of Network (RJ-45) Ports 8

Port/Expansion Slot Details 16 x Gigabit Ethernet Network

▪ Media & Performance:

Media Type Supported Twisted Pair

Ethernet Technology Gigabit Ethernet

Network Technology 10/100/1000Base-T

Pros:

- Web-based interface
- Quality of Service (QoS)
- Energy-efficient
- Affordable

Cons:

- Limited Port Count
- Limited scalability and redundancy
- No Fiber Uplinks



SWITCH

OPTION 2 : NETGEAR 48-PORT GIGABIT ETHERNET SMART SWITCH (GS748T) - MANAGED

Price: **20,906.25**

- 4 x 1G SFP ports (2 are shared)
- Smart software with easy-to-use interface offers managed control for secure setup, access, and SNMP (NMS 300) management.
- Supports desktop or rackmount placement, and includes all the necessary mounting hardware in the box
- Advanced VLAN & QoS IGMP Advanced Security Link Aggregation IPv6
- Energy efficient design compliant with IEEE802.3az
- Quiet operation

Pros:

- Scalability
- High Bandwidth
- Energy Efficient

Cons:

- Heat Management



OPTION 3: TP-LINK TL-SG3428

Price: **15,000 - 17,000**

- 24 Gigabit Ethernet ports
- 4 SFP slots for fiber uplinks
- Layer 2 and Layer 3 features
- QoS (Quality of Service)
- VLAN support
- PoE+ support on all ports
- Centralized management with Omada Pro Controller

Pros:

- Cloud-based options
- Robust security features
- High PoE budget (250W)

Cons:

- Management interface can be complex for beginners
- Higher price point compared to basic models

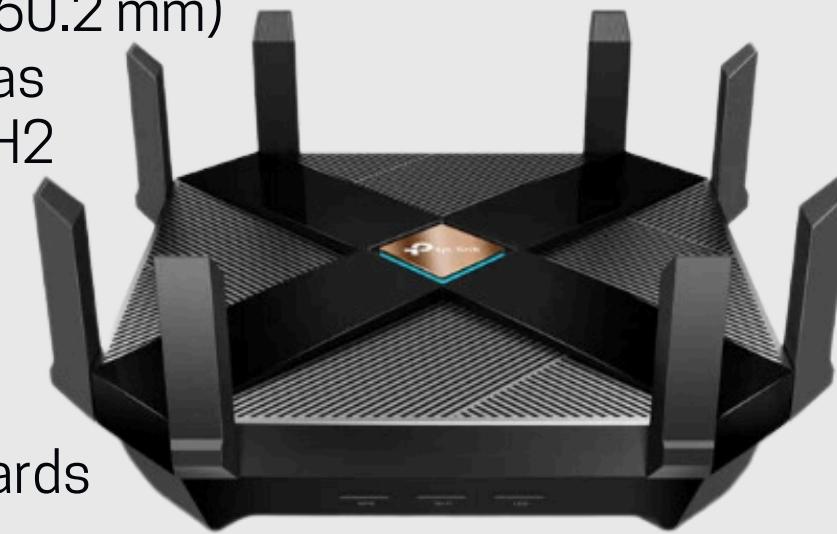


ROUTER

OPTION 1: TP-LINK ARCHER AX6000 NEXT-GEN WI-FI ROUTER

PRICE: 19,500

- Memory: 1GB RAM and 128MB FLASH
- Interface: 8 1G/100M / 10M Lan Ports
1 2.5G / 2G / 1G / 100M WAN port
1 USB-A 3.0 port + USB-C 3.0 port
8 Gigabit Ethernet Ports
- External Power Supply: 12V/ 4A
- Dimensions: 10.3 * 10.3 *2.4n (261.2 *261.2<60.2 mm)
- Antenna: 8 High Performance External Antennas
- Wireless Standards: IEEE 802.11ax to 5GHz
IEEE 802.11ax to 2.4GHz
- Frequency: 2.4GHz and 5GHz
- Signal Rate: 5GHz 4804Mbps (802.11ax)
2.4GHz 1148Mbps (802.11ax)
compatible with 802.11a/b/g/n/ac Wi-Fi standards



Pros:

- Wi-Fi 6 Support
- High-Speed Connectivity
- Communication in multiple devices
- Efficient data transmission
- Gigabit Ethernet Ports:

Cons:

- Expensive
- Bulky
- Complex Configuration

ROUTER

OPTION 2: TP-LINK ARCHER MR600 4G LTE

PRICE: 13,735.26

- 4G LTE Cat6 technology
- Dual-band Wi-Fi (2.4 GHz and 5 GHz)
- Maximum wireless speed of up to 300 Mbps on 2.4 GHz and 867 Mbps on 5 GHz
- Four Gigabit Ethernet ports
- Two detachable external antennas
- Built-in SIM card slot
- Dual-SIM support
- Compact and portable design
- Easy setup and management with TP-Link's web-based interface and mobile app

Pros:

- Versatile connectivity
- High-speed LTE
- Dual-band Wi-Fi
- Gigabit Ethernet ports
- Easy setup and management

Cons:

- Cellular coverage dependence
- Single WAN connection
- Limited speeds



OPTION 3: TP-LINK ARCHER AX20 WIFI

PRICE: 10,490.50

- Wi-Fi 6 (802.11ax) technology
- Dual-band Wi-Fi (2.4 GHz and 5 GHz)
- Maximum wireless speed of up to 1201 Mbps on 5 GHz and 574 Mbps on 2.4 GHz
- Four Gigabit Ethernet ports
- WPA3 encryption
- Easy setup and management with TP-Link's web-based interface and mobile app

Pros:

- Wi-Fi 6 Support
- Dual-Band Wi-Fi
- WPA3 Encryption
- Gigabit Ethernet ports
- Easy setup and management

Cons:

- Limited Wired Connectivity
- No USB Ports
- Basic management feature



WIRELESS ACCESS POINT

OPITON 1: TP-LINK AX1800 CEILING MOUNT WIFI 6 ACCESS POINT

PRICE: ₦7,490

- 1× Gigabit Ethernet (RJ-45) Port (supports IEEE802.3at PoE)
- Wireless Standards: IEEE 802.11ax/ac/n/g/b/a
- Frequency: 2.4 GHz and 5 GHz
- Signal Rate: 5 GHz: Up to 1201 Mbps / 2.4 GHz: Up to 574 Mbps
- Power Supply : 802.3at PoE / 12 V / 1 A DC
- Power Consumption: EU: 12.8 W (For PoE); 10.8 W (for DC) / US: 13.9W (For PoE); 11.8 W (for DC)

Pros:

- High-speed Wi-Fi 6
- Dual-band support
- Seamless roaming
- Discreet placement
- PoE support

Cons:

- Requires expertise
- Expensive



WIRELESS ACCESS POINT

OPTION 2: TP-LINK AC1750 2 PORT WAP

PRICE: 14,013.80

- Wireless Standard: 802.11ac
- Dual-Band Support: 2.4 GHz and 5 GHz
- Wireless Speed: Up to 1750 Mbps (450 Mbps on 2.4 GHz, 1300 Mbps on 5 GHz)
- Ethernet Ports: 2 Gigabit Ethernet LAN ports
- Antennas: 3 detachable antennas
- PoE Support: Yes
- Management: Centralized management with controller software

Pros:

- High-speed connectivity
- Dual-band support
- Detachable antennas
- PoE support

Cons:

- Requires expertise
- Expensive
- Needs extended coverage



OPTION 3: NETGEAR WAX214PA 1 PORT WAP

PRICE: 13,852.40

- Wireless Standard: 802.11ax (Wi-Fi 6)
- Wireless Speed: Up to 1800 Mbps (600 Mbps on 2.4 GHz, 1200 Mbps on 5 GHz) 10/100/1000Mbit/s
- Ethernet Ports: 1 Gigabit Ethernet port
- PoE Support: Yes
- Management: Cloud or local web management
- Antennas: Internal antennas

Pros:

- High-speed connectivity
- Wi-Fi 6
- PoE support



Cons:

- Requires expertise
- Expensive
- Needs extended coverage
- Limited wired connectivity

PRINTER

OPTION 1: EPSON ECOTANK L3210 OFFICE PRINTER

PRICE: ₱8,999.00

Specifications:

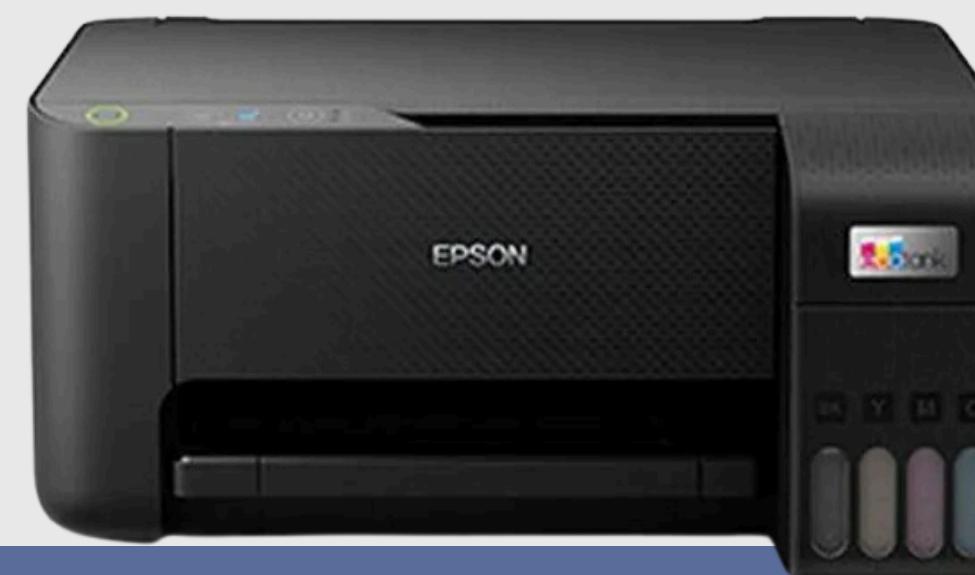
Type: Inkjet Printer

Print speed: 33 pages per minute (ppm) for black and white and up to 15 ppm for color

Print resolution (dpi): 5760 x 1440 dpi

Connectivity options: USB 2.0, wifi, wifi Direct

- Refillable ink tanks for cost savings
- High print resolution of up to 5760 x 1440 dp
- Fast printing speeds of up to 33 pages per minute in black



PRINTER

OPTION 2: EPSON L3210 MULTI FUNCTIONAL INTEGRATED INK TANK PRINTER

PRICE: ₱9,300.00

Functions: Print, Copy, Scan

Printing Technology: On-demand Inkjet (Piezoelectric)

Print Resolution: Up to 5760 x 1440 dpi

Print Speed: Up to 10.5 ppm (Black), 5.0 ppm (Color)

Scanner Type: Flatbed color image scanner

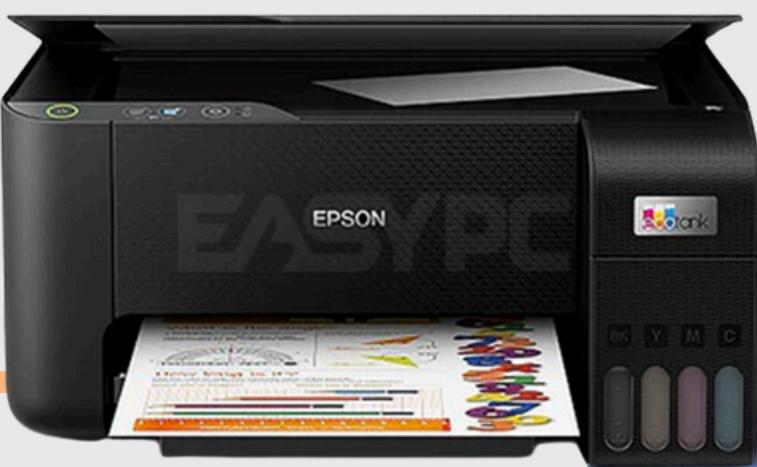
Scan Resolution: 600 x 1200 dpi

Paper Sizes: A4, A5, A6, B5, 10x15cm (4x6"), 13x18cm (5x7"), 9x13cm (3.5x5"), Letter, Legal, Half Letter (5.5x8.5"), 13x20cm (5x8"), 20x25cm (8x10"), 16:9 wide, 100x148mm

Connectivity: USB

Pros:

- High-quality printing
- Refillable ink tanks
- Easy setup
- High-speed printing



Cons:

- only USB connectivity
- No wireless connectivity
- Limited paper capacity

PRICE: ₱10,995.00

Functions: Print, Copy, Scan

Printing Technology: On-demand Inkjet (Piezoelectric)

Print Resolution: Up to 5760 x 1440 dpi

Print Speed: Up to 33 ppm (Black), 15 ppm (Color)

Scanner Type: Flatbed color image scanner

Scan Resolution: 1200 x 2400 dpi

Paper Sizes: A4, A5, A6, B5, 10x15cm (4x6"), 13x18cm (5x7"), 9x13cm (3.5x5"), Letter, Legal, Half Letter (5.5x8.5"), 13x20cm (5x8"), 20x25cm (8x10"), 16:9 wide, Envelopes: #10, DL, C6

Connectivity: Wi-Fi, USB

Pros:

- High-quality printing
- Refillable ink tanks
- Easy setup
- High-speed printing
- Wi-Fi connectivity

Cons:

- No Ethernet connectivity
- Slower scanning speed
- Limited paper capacity



SCANNER

OPTION 1: HP SMART TANK 519 WIRELESS SCANNER

PRICE: ₱10,923.00

Specifications:

Scanning Technology: Contact Image Sensor (CIS)

Optical Resolution: Up to 1200 dpi

Maximum Document Size: 216 x 297 mm (8.5 x 11.7 inches)

Supported Operating Systems: Windows, macOS

Scanning Speed: Up to 7 ppm (black and white), Up to 3 ppm (color)

Input Modes: Front panel scan, Copy, HP Smart app

Supported File Formats: PDF, JPEG, PNG, TIFF

Connection: USB 2.0, WiFi

Pros:

- High-quality scanning
- Wireless connectivity
- Easy setup
- Compact and space-saving
- Supports multiple file formats

Cons:

- No Ethernet connectivity
- Slower scanning speed
- Lack of automatic document feeder



SCANNER

OPTION 2: HP SCANJET PRO 2600 F1 SCANNER

PRICE: ₱25,750

Processor Speed: 666 MHz

Resolution: 600 dpi

Scan speed: Up to 25 ppm/50 ipm (b&w, gray and color, 300 dpi)

Connectivity: USB 2.0

Mac Compatible: Yes

Standard Memory: 256 MB

Color Scanning: Yes

Compatible Operating Systems: Windows 11; Windows 10; Windows 8; Windows 8.1; Windows 7; Windows Server; macOS 10.14 Mojave;

macOS 10.15 Catalina; macOS 11 Big Sur; macOS 12 Monterey; Linux

Media Size, ADF: Letter; Legal; Executive; A4; A5; A6; B5; B5 (JIS)

Pros:

- High-quality scanning
- Fast Scan Speed
- Easy setup
- Automatic document feeder
- Compact and space-saving
- Supports multiple file formats

Cons:

- No Ethernet/wireless connectivity
- Limited input/output tray capacity



OPTION 3: HP SCANJET PRO 2000 S2 SCANNER

PRICE: ₱17,400

Scanning Technology: Contact Image Sensor (CIS)

Optical Resolution: Up to 600 dpi

Maximum Document Size: 216 x 3100 mm (8.5 x 122 inches)

Connectivity: USB

Supported Operating Systems: Windows, macOS, Linux

Scanning Speed: Up to 24 ppm (black and white), Up to 20 ppm (color)

Input Modes: Simplex

Automatic Document Feeder (ADF) Capacity: Up to 50 sheets

Pros:

- High-quality scanning
- Efficient batch scanning
- Easy setup
- Compact and space-saving
- Large maximum document size
- Easy connectivity via USB interface
- Automatic Document Feeder

Cons:

- No Ethernet/wireless connectivity
- Limited input modes
- May require additional software



CABLE

AMP 1427287-4 CAT 5E UTP CABLE

Price: ₱ 5,599

Meets or exceeds TIA/EIA-568-B Enhanced Category 5 ISO 11801:2002 Class D specifications, Lead-free (no heavy metals), 24 AWG, solid conductors. In addition, 4-Pair cable: Performance characterized to 155 MHz. Meets or exceeds all requirements for Gigabit Ethernet (IEEE 802.3ab)



1000ft Reel-in-a-Box

FIREWALL

SOPHOS FIREWALL XG85 TOTALPROTECT PLUS

PRICE: ₱40,300.00

Sophos is a comprehensive, next-generation firewall and endpoint protection that exposes hidden risks, blocks unknown threats, and automatically responds to incidents. Known as the world's best visibility, protection, and response to the ever evolving cyberthreats against your critical business data, Sophos brings a fresh new approach on how you manage your firewall and monitor what's happening in your network.



CABLE TESTER

MULTICOMP PRO MP760864 PHP802.20

Price: Php802.20

Feature

- Ideal for use in verifying connections and labeling conductors
- Remote or local continuity testing
- Remote probe with holder
- Remote flashing LED continuity indication (green/red for polarity reverse)
- Croc clip type probes

Specifications

Power supply : 9 Volt Battery

Battery life : Approx. 12 months with normal use.

Continuity confirmation : Equal to or less than $1\text{K}\Omega$

Wire Verification Distance : 10,000Ft, 3000m (26 Gage min.)

Fuse : 250V 0.5A fast blow

Operating Temperature : 10°F to 113°F (-12°C to 45°C)

Storage Temperature : -4°F to 176°F (-20°C to 80°C)

Operating Humidity : 10 to 90% RH (non-condensing)

Dimensions : 3.8" x 1.8" x 1.32" (96mm x 47mm x 33mm)

Weight : 4.8oz (135g)



TONE GENERATOR

RS PRO RS1013 TONE GENERATOR

Price: PHP5,897.71

Features:

- Connections to telephone and Ethernet internet wiring
- Selectable continuous or variable tone generation
- Built-in speaker on probe with sensitivity control

Specifications:

Test Type: Tone Generation

Tone: Yes

Power Source: Battery

Battery Type: 9V

Dimensions: 57mm x 25.4mm x 228(Probe) mm, 58.5mm x 58.5mm x 34.3(Generator)mm

Length: 34.3(Generator mm, 228 (Probe)mm

Width: 25.4(Probe)mm, 58.5 (Generator)mm

Height: 57(Probe)mm, 58.5(Generator)mm

Weight: 270g

1000Hz Tone Frequency





CONVERGE ICT SOLUTIONS INC.

INTERNET SERVICE PROVIDER (ISP)

Converge

Converge ICT Solutions Inc., commonly referred to as Converge, is a telecommunication service provider in the Philippines. It operates fiber optic broadband networks, Internet Protocol television, cable television, and cable Internet in the country.

-to establish connectivity to the router within the network infrastructure

RECOMMENDED SOFTWARE



SOFTWARE

- **NinjaOne - Network Monitoring software**

Cloud-based portal for viewing and tracking network data, meaning that you won't need any specialized servers or other hardware to deploy it.

NinjaOne provides a platform where data can be collated and examined. However, it's particularly useful for organizations with a number of remote locations because administrators can set up multiple sub-accounts for each site. Data is logged separately and categorized by site, making it easy to identify where problems are manifesting.

Another bonus with NinjaOne is that it reports problems to administrators via email or SMS. No one has to monitor the software in real-time. If networking issues arise, a notification is generated and the problem can be quickly isolated and resolved.

The logo for NinjaOne features the word "ninja" in a dark blue, lowercase, sans-serif font, and the word "One" in a light blue, lowercase, sans-serif font. The "O" in "One" is a light blue circle.

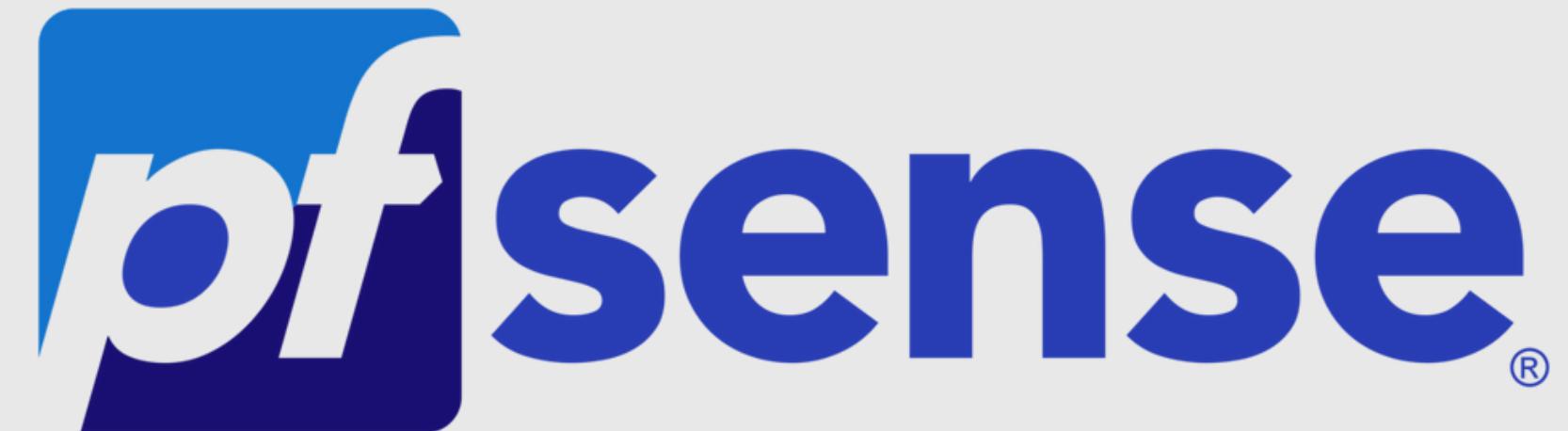
PRICE: Php55- Php600/month

This is contingent upon the quantity of endpoints and the nature of the discussions, as stated by current users.

SOFTWARE

- **Netgate pfSense - Firewall/VPN software**

pfSense is a software that serves as a firewall, router, traffic classifier, DHCP server IPv4/6, OpenVPN server and client, Wireguard server and client, Certificate Management and Authority, User Manager, DMZ and multi-WAN, all with logging to aid traffic analysis and debug. Enables users to connect to private, secure networks of the organization. To provide employees with secure, encrypted, and remote access to the company's internal network. This enables employees to access applications, files, printers, and other corporate resources on the corporate network as if they were at the office.



PRICE: Php7462.71/year

pfSense Plus software is available by migrating from a pre-installed pfSense CE image to pfSense Plus software.

SOFTWARE

- **Cloudflare Application Security and Performance**

All Cloudflare plans offer unlimited, unmetered mitigation of DDoS attacks, regardless of the size of attack. Cloudflare's layered security approach combines multiple DDoS mitigation capabilities into one service, preventing disruptions caused by bad traffic while allowing good traffic through. With 30 Tbps of capacity, Cloudflare's global network can handle any modern distributed attack, including those targeting DNS infrastructure.



PRICE: FREE

There are options to pay for subscription for business which would be Php11540.60 per month

- **Bitdefender Total Security - Antivirus**

Malware files are pinpointed even before they begin downloading, web trackers are likewise rooted out and blocked, and if you try to access a site with known threats you'll receive a warning that's hard to miss (or ignore.)



Bitdefender

PRICE: Php1384.61 - Php2077.78/year

RECOMMENDED PC/LAPTOP



IDEAL FOR OFFICE WORKS & BASIC TASKS

ASUS VIVOBOOK X1405ZA-LY246WS LAPTOP



Price: ₱36,495.00

PROCESSOR: Intel® Core™ i5-1235U

DISPLAY: 14", WUXGA (1920 x 1200) 16:10 aspect ratio

MEMORY: 16GB DDR4 on board

STORAGE: 512GB M.2 NVMe™ PCIe® 3.0 SSD

GPU: Intel Iris Xe Graphics

OS: Windows 11 Home

RAIJIN DESKTOP EXPRESS



Price: ₱17,500.00

PROCESSOR: AMD RYZEN 3 4350G QUAD CORE APU
GIGABYTE/MSI/ASROCK/ASUS B450M MOTHERBOARD
TEAMGROUP/GSKILL/ADATA/LEXAR 2X8GB DDR4 3200MHZ
CRUCIAL/TEAMGROUP/ADATA/WD/LEXAR 480GB SSD
1STPLAYER/TECWARE/DARKFLASH CHASSIS W/ TRIPLE FAN
22" 1080P MONITOR
WINDOWS 11 and all Basic Applications

IDEAL FOR RENDERING-AUTOCAD,CNC PROGRAM

GIGABYTE G5 KF5-G3PH383SH GAMING LAPTOP



Price: ₱63,950.00

PROCESSOR: Intel Core i7-12650H 4.7 GHz (24MB Cache, up to 4.7 GHz, 6 P-cores and 4 E-cores)

DISPLAY: 15.6" (1920x1080) 144HZ FHD.

MEMORY: 8 GB RAM.

STORAGE: 512 GB SSD.

GPU: NVIDIA GeForce RTX 4060 8GB Laptop GPU.

OS: Windows 11 Home.

RAIZEN AMD RYZEN 5800X



Price: ₱63,005.00

PROCESSOR: AMD Ryzen 7 5800X 8-Core 3.8 GHz Socket MSI MAG B550 Tomahawk

GSKILL Trident Z NEO 16GB 2x8GB DDR4 3600MHz

MSI GeForce RTX 3070 VENTUS 3X Plus

Crucial P3 Plus 500GB | 1TB | 2TB PCIe NVME M.2 2280 PCIe Gen 4 SSD Solid State Drive - 1TB

MSI MAG Coreliquid C240 AIO Liquid Cooling System

WINDOWS 11 and all Basic Applications

EXPENSES

QTY	HARDWARE	PRICE	TOTAL
14	Asus Vivobook Laptop	₱36,495.00	₱510,930.00
22	Raijin Desktop Express PC	₱17,500.00	₱385,000.00
4	Raizen Amd Ryzen 5800x PC	₱63,005.00	₱252,020.00
4	Epson L3250 Printer	₱10,995.00	₱43,980.00
1	Sophos Firewall	₱40,300.00	₱40,300.00
3	TP-Link Archer Router	₱19,500.00	₱58,500.00
1	Dell PowerEdge Server	₱247,000.00	₱247,000.00
1	16 port Cisco Switch	₱12,988.00	₱38,964.00
2	NETGEAR 48-Port Switch	₱20,906.25	₱41,812.50
4	TP-Link AX1800 Wireless Access Point	₱7,490.00	₱29,960.00
2	CAT5-E Cable	₱ 5,599.00	₱11,198.00
OVERALL:			₱1,659,664.50

SOFTWARE	YEARLY EXPENSE
NinjaOne - Network Monitoring software	₱7,200.00
Netgate pfSense - Firewall/VPN software	₱7,462.71
Cloudflare Application Security and Performance	FREE
Bitdefender Total Security - Antivirus	₱2,077.78
Converge- ISP	₱18,000.00
TOTAL EXPENSE / YEAR	
	₱34,739.71

OVERALL:

₱1,694,404.21

Portfolio cs/gf

Gabriel Franz A. Serviano

Introduction

A dedicated and innovative professional with a strong background in Computer Science and Information Technology, adept at leveraging technology to solve complex problems and drive business growth. My experience encompasses a diverse range of roles and responsibilities, from software development and database management to IT systems administration and cybersecurity. I thrive in fast-paced environments where collaboration, adaptability, and continuous learning are paramount. Driven by a curiosity to explore new technologies and a desire to make a positive impact, I am enthusiastic about embracing the challenges and opportunities that lie ahead in the ever-evolving landscape of Computer Science and Information Technology.

Personal Skills

Communication

Teamwork

Leadership

Negotiation

Knowledgeable Skills

JavaScrip

Python

Java

SQL

HTML/CSS

Network Management

Cybersecurity

Education

Master's Degree in Information Technology
National College of Science and Technology.

2015 - 2017

Dasmariñas, Cavite

Bachelor's Degree in Information Technology

Pateros Technological College

2011 - 2015

205 College St, Pateros, Metro Manila

Work Experience

Software Developer (2022 - Present)

- Developed a web-based inventory management system: Collaborated with a team of developers to design and implement a scalable inventory management system using Python Django framework.

IT System Administrator (2020 - 2022)

- Network Administration: Designed, implemented, and maintained the organization's network infrastructure, including routers, switches, firewalls, and wireless access points. Configured VLANs, VPNs, and QoS policies to optimize network performance and security.
- Server Management: Managed a heterogeneous server environment comprising Windows, Linux, and virtualization platforms such as VMware and Hyper-V. Installed, configured, and maintained server operating systems, services, and applications, including Active Directory, DNS, DHCP, Exchange, Apache, and MySQL.

Database Administrator (2017 - 2020)

- Reduced server load by 25% after conducting thorough SQL query audits.
- Achieved 20% improvement in data access by implementing indexing on heavily accessed tables.

Certification





Let's Connect

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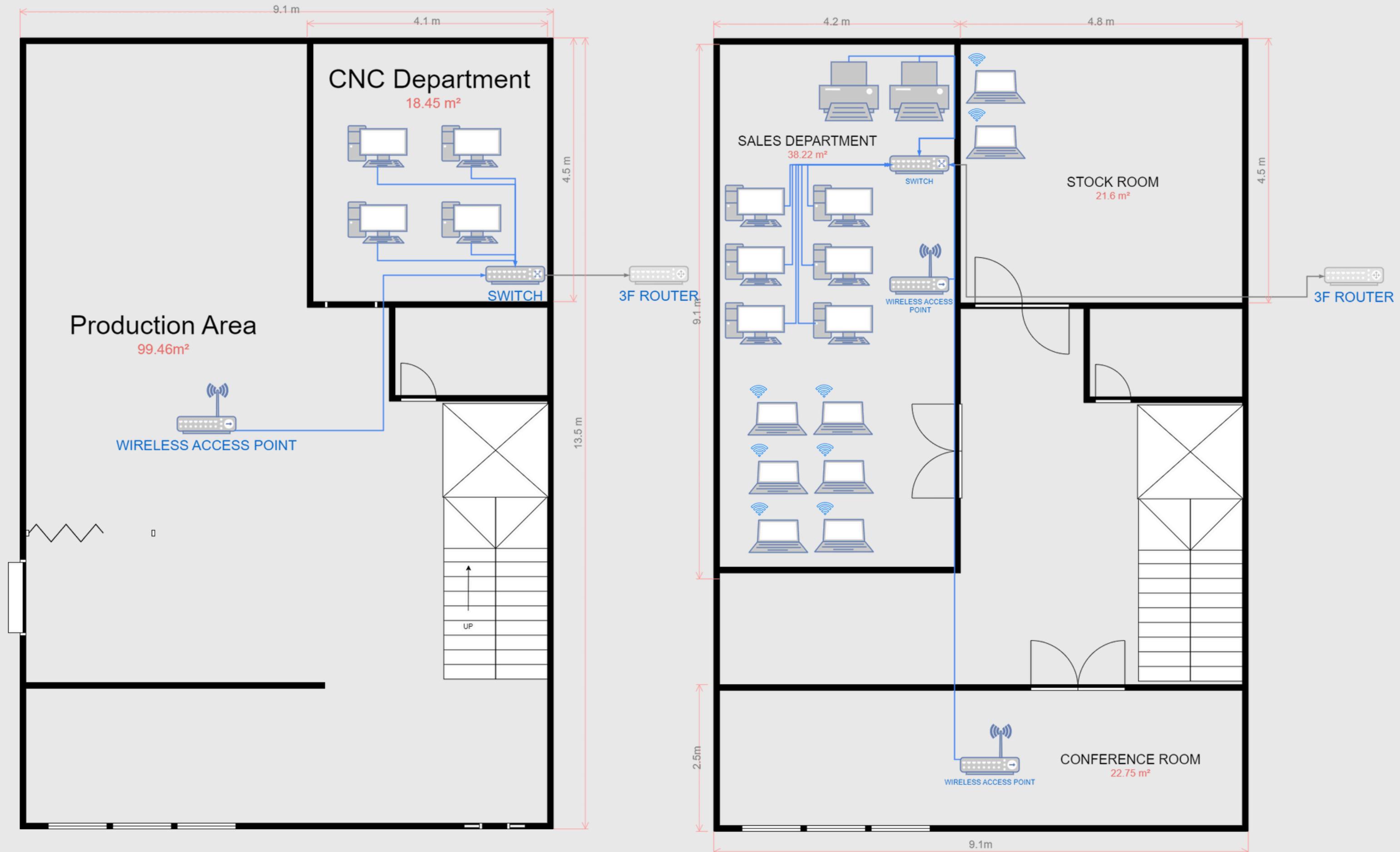
A collage of images related to network technology, including a laptop, binary code, a cloud icon, and a person's hands using a pen on a laptop screen.

NETWORK DETAILS

NETWORK PLAN

FIRST FLOOR

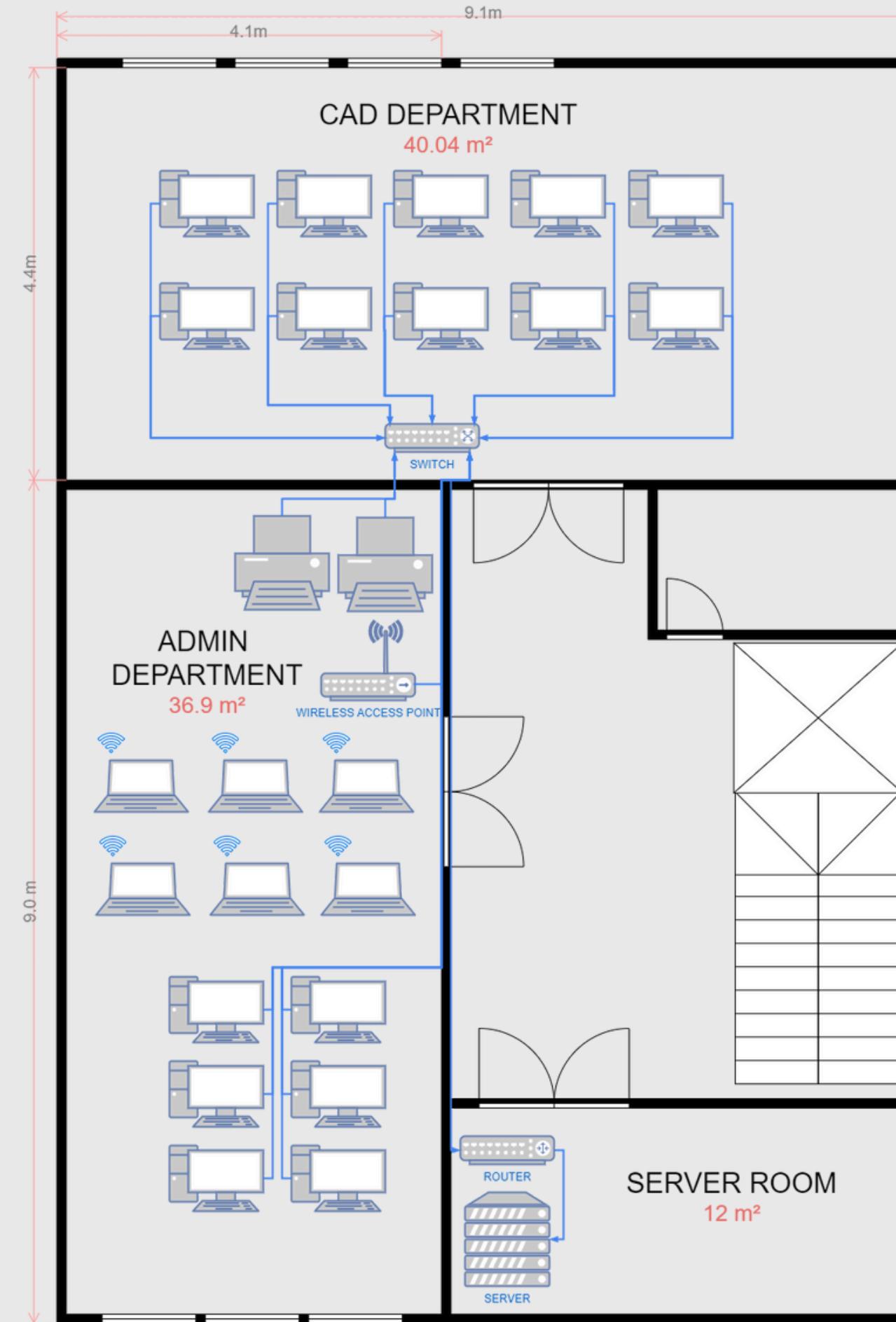
SECOND FLOOR

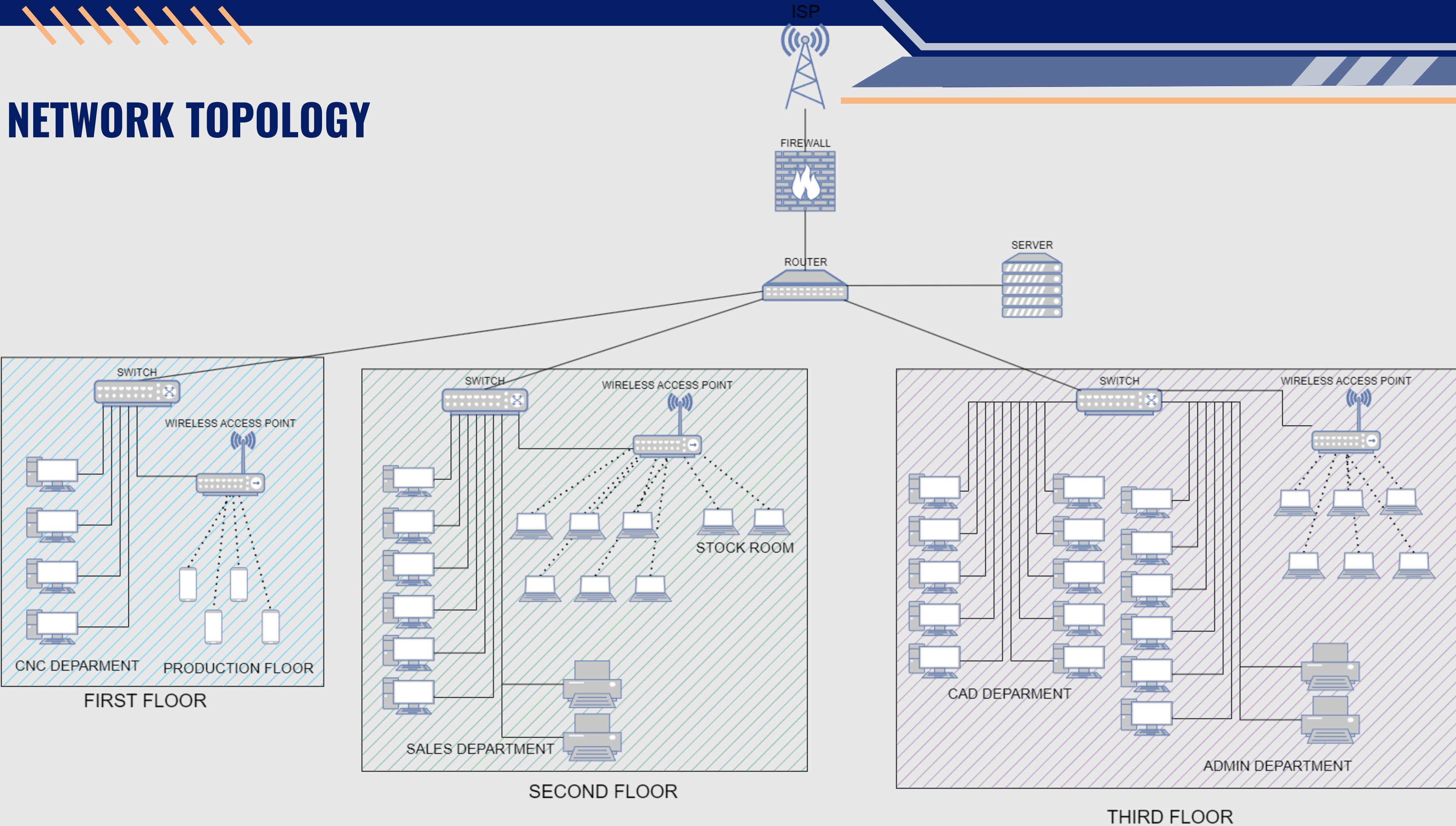




NETWORK PLAN

THIRD FLOOR





Description

First Floor

- CNC Department
- 4 computers
- 1 Switch
- Production Area
- Wifi Access

Second Floor

- Sales Department
- 6 Computers
- 6 Laptops
- 2 Printers
- 1 Switch
- Wifi Access
- Stock Room
- 2 Laptops
- Conference Room
- Wifi Access

Third Floor

- CAD Department
- 10 Computers
- 1 Switch
- Admin Department
- 6 Computers
- 6 Laptops
- 2 Printers
- 1 Switch
- Wifi Access
- Server Room
- ISP
- Firewall
- Router
- Server

Functions

First Floor

- CNC Department.

This Department is responsible for setting up CNC machines like bending and welding. This involved in quality control activities to ensure that machined parts meet specified tolerances and quality standards.

- Production Area

Raw materials, components, and finished products move through the production.

Second Floor

- Sales Department

This department is responsible for identifying and acquiring new costumers. they also manages relationships with existing costumers to foster loyalty, repeat business, referrals.

- Stock Room

Storing raw materials, components, work in progress, finished goods and other inventory items.

- Conference Room

Gather and conduct meetings, discussions, and presentations. Private and secure environment for confidential discussions.

Third Floor

- CAD Department

This is where the detailed digital designs, drawings, and models of products, components, and buildings. They use CAD software to translate conceptual ideas into 2D drawings or 3D models.

- Admin Department

They are responsible for managing various administrative task and supporting the smooth operation of an organization.

- Server Room

A space within an organization designed to house and manage servers, and networking equipment, and other critical IT infrastructure.

THANK YOU

